

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION**

HONEYWELL INTERNATIONAL INC. and)
HONEYWELL INTELLECTUAL)
PROPERTIES INC.,)

Plaintiffs)

v.)

ACER AMERICA CORPORATION,)
AU OPTRONICS CORPORATION,)
AU OPTRONICS CORPORATION)
AMERICA,)
BENQ AMERICA CORP.,)
BENQ USA CORP.,)
CHUNGHWA PICTURE TUBES, LTD.,)
NOVATEK MICROELECTRONICS)
CORPORATION, LTD.,)

and)

QUANTA DISPLAY, INC.,)

Defendants.)

C.A. No. 6:07-CV-125 (LED)

JURY TRIAL DEMANDED

**MOTION TO EXCLUDE THE OPINION TESTIMONY OF ROGER STEWART
RELATING TO FERROELECTRIC LIQUID CRYSTAL
AND THE MIHARA REFERENCE**

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I. INTRODUCTION

Plaintiffs Honeywell International Inc. and Honeywell Intellectual Properties, Inc. (collectively, "Honeywell") hereby move this Court for an Order excluding opinion testimony of Defendants¹ expert witness, Roger Stewart, relating to ferroelectric liquid crystal and the Mihara reference (PX 5A).² In his expert report, the Mihara reference is the primary reference upon which Mr. Stewart relies for his anticipation and obviousness arguments. The Mihara reference describes a passive-matrix display that uses ferroelectric liquid crystal ("FLC"), a material with very different properties than the nematic liquid crystal material described in the '823 Patent. However, Defendants have failed to demonstrate that Mr. Stewart has *any* experience with FLC, let alone sufficient experience to qualify him to provide expert opinion testimony related to this material. Mr. Stewart's lack of experience with FLC is demonstrated by the fact that he does not understand the material's fundamental properties, including the fact that, unlike nematic liquid crystal, FLC is completely polarity dependent. This fact is about which Mr. Stewart was not aware at the time he wrote his report and is critical to any comparison of the Mihara reference to the '823 Patent. Because he does not have the level of knowledge, skill, experience, training, or education related to FLC required by Federal Rule of Evidence 702 and *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), Honeywell respectfully requests that this Court preclude Mr. Stewart from providing opinion testimony related to FLC in general, and the Mihara reference in particular.

¹ "Defendants" refers collectively to AU Optronics Corporation, AU Optronics Corporation America, BenQ America Corp., BenQ USA Corp., Chunghwa Picture Tubes, Ltd., and Novatek Microelectronics Corporation, Ltd.

² "Mihara" refers to Mihara et al., U.S. Patent No. 5,058,994.

II. STATEMENT OF FACTS

Neither Mr. Stewart's curriculum vitae nor his Expert Report discloses that Mr. Stewart has any experience designing, developing or working with displays that use FLC material. *See* Expert Report of Roger Stewart (PX 6B6) and Addendum A. Yet FLC is the material used in the primary prior art reference upon which Mr. Stewart relies in his Expert Report. *See* Addendum D1-D4 of Stewart's Expert Report.³ In one of his claim charts, Mr. Stewart opines that the Mihara reference anticipates the '823 Patent. *Id.* In his other three claim charts, Mr. Stewart opines that the combination of Mihara and other references render the '823 Patent obvious. *Id.*

The pixels in a display utilizing FLC change from a black state to a white state depending completely on the polarity of the voltage applied. Drabik Rebuttal Report at ¶84 ('FLCs are explicitly sensitive to drive voltage polarity.') and at ¶ 86 ('the polarity of the voltage applied across a FLC cell determines whether that cell is driven to a white state or a black state'). This property of FLC is addressed in the Mihara reference itself. For example, in describing the field of the invention, Mihara describes a prior art display that uses FLC and 'discloses a multiplex driving method comprising applying a scanning selection signal of an AC voltage the polarity of which is reversed . . . for each frame to selectively write a 'white' state . . . in a frame and then selectively write a 'black' state . . .' Mihara at 1:45-57. Also, Mihara describes FLC as 'per se [] essentially capable of only a binary expression,' i.e., white or black. *Id.* at 5:14-16. *See also id.* at 17:51-59 (discussing 'transmittance in the bright state/transmittance in the dark state'); *id.* at 18:52-53 ('As the ferroelectric liquid crystal showing **bistability** used in the present invention .

³ By contrast, Dr. Drabik, Honeywell's expert, has more than ten years experience working with FLC material and has published papers on FLC. Deposition of Dr. Timothy J. Drabik (4/3/09) (PX 6C6) at 131:17-23; Rebuttal Expert Report of Dr. Timothy J. Drabik Regarding Validity of U.S. Patent No. 5,041,823 ('Drabik Rebuttal Report') (PX 6D6) Exhibits 10-12.

. .ö).⁴ Because FLC is only capable of binary expression, the individual pixels cannot achieve an intermediate brightness state.⁵ Drabik Rebuttal Report at ¶ 106.

FLC is very different than the nematic liquid crystal described in the '823 Patent. In displays using nematic liquid crystal, the polarity of the voltage is switched to prevent electroplating, not to achieve a white or black state. '823 Patent at 1:20-24. In these displays (using nematic liquid crystal), the brightness or darkness of a pixel is controlled by the magnitude of voltage, not its polarity. *Id.* at 1:27-30. The flicker that results and that the '823 Patent alleviates is the unintended and undesirable consequence of switching polarity. *Id.* at 2:31-35. On the other hand, in FLC displays, polarity is switched for the precise purpose of affecting brightness.

Defendants' expert witness, Roger Stewart, has opined that Mihara, a reference which utilizes FLC, anticipates the '823 patent and, in combination with other references, renders the '823 Patent obvious. Expert Report of Roger Stewart at pp. 42-45 and Addendum D1-D4. However, Mr. Stewart does not seem to understand that FLC, unlike nematic liquid crystal, responds very differently to positive and negative polarities:

Q. Does ferroelectric liquid crystal behave independently of polarity?

A. I'm not aware of any asymmetry in ferroelectric.

Q. Okay.

⁴ "Bistability" refers to the tendency of FLC to remain in a white or black stage without voltage being applied. Because of this bistability, it is difficult to apply gray levels using FLC, another fact about which Mr. Stewart has no understanding.

⁵ In Mihara, gray scale at the display level is achieved by grouping pairs of pixels, one pixel in each pair larger than the other pixel in that same pair. When the larger pixel is white and the smaller pixel is black, a brighter pair of pixels results. When the larger pixel is black and the smaller pixel is white, a darker pair of pixels results. Mihara at Fig. 3. "In this way, a gray scale of 4 levels can be realized by using FLC which per se is essentially capable of only binary expression." *Id.* at 5:14-16.

A. I mean the liquid crystal doesn't know what's up, down, whatever, it tends to be naturally symmetric. ...

Deposition of Roger Stewart (2/26/09) (Stewart Dep.) (PX 65) at 209:6-13.

In addition, Mr. Stewart misunderstands Mihara's teachings, and the properties of FLC, when he opines that Mihara teaches the use of pulse-width modulation to achieve gray scale:

Q: So you're saying that in Mihara voltage is provided to the pixel for varying periods of time, and the longer the voltage is provided the brighter the pixel?

A: Well if the voltage is a black voltage the longer I apply it the darker it'll be. If it's a white condition it'll be brighter.

Stewart Dep. at 219:19-25. *See also* Expert Report of Roger Stewart, Addendum D1 at p. 5 (Some 994 embodiments also have a driver interface that provides for variable pulse widths to produce a display with gray scale capability). In reality, there is no pulse-width modulation of any kind present in Mihara. Drabik Rebuttal Report at ¶¶ 105, 107. As Dr. Drabik explained, the individual pixels do not have an intermediate brightness state. Drabik Rebuttal Report at ¶ 106. In addition, the portion of the specification upon which Mr. Stewart relies for this opinion reveals that, in fact, Mihara invokes asymmetric pulses in order to *eliminate* departure from the ideal binary-level display, and not to *provide* gray level capability. Drabik Rebuttal Report at ¶ 104.

III. ARGUMENT

Expert testimony is admissible only if it satisfies the standards that the United States Supreme Court articulated in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*: (1) the expert is competent and qualified to testify regarding the matters that he intends to address; (2) the

methodology by which the expert reaches his conclusions is sufficiently reliable; and (3) the expert provides testimony that assists the trier of fact. 509 U.S. at 590-91.

The gate keeping obligation identified in *Daubert* is now codified in Fed. R. Evid. 702, which provides:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, ***a witness qualified as an expert by knowledge, skill, experience, training, or education***, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

Fed. R. Evid. 702 (emphasis added).

When a party intends to proffer expert testimony, the trial judge must determine whether the party proffering the expert witness has established, by a preponderance of the evidence, the qualification of that witness and the admissibility of his or her testimony. *Daubert*, 509 U.S. at 591-93; *see also Kannankeril v. Terminix Int'l, Inc.*, 128 F.3d 802, 806 (3d Cir. 1997) (ö[I]t is the role of the trial judge to act as a -gatekeeperø to ensure that any and all expert testimony or evidence is not only relevant, but also reliable.ö). In this case, Defendants have not established that Mr. Stewart is qualified as an expert on FLC and the use of that material in the Mihara reference.

The first factor articulated by the Supreme Court in *Daubert*, is that the expert be öcompetent and qualified to testify regarding the matters that he intends to address.ö *Daubert*, 526 U.S. at 147. Similarly, Federal Rule of Evidence 702 requires that an expert be öqualified as an expert by knowledge, skill, experience, training, or education.ö Fed. R. Evid. 702. Further, Federal Rule of Civil Procedure 26 provides that an expert's report must contain, *inter alia*, öthe

witness's qualifications. Fed. R. Civ. P. 26(a)(2)(B)(iv). Mr. Stewart's report, including the curriculum vitae attached thereto, discloses no experience with FLC, and certainly no experience that qualifies him to provide expert testimony related to FLC displays.

While Mr. Stewart has experience designing and working with *other* types of liquid crystal displays, he does not have experience with FLC displays. Because a display using FLC is the primary reference upon which Mr. Stewart relies, this complete absence of experience is critical. *See Stagl v. Delta Air Lines, Inc.*, 117 F.3d 76, 81 (2d Cir. 1997) ("In some circumstances, a district court may properly conclude that witnesses are insufficiently qualified despite the relevance of their testimony because their expertise is too general or too deficient."). The fact that he is not qualified as an expert is highlighted by the opinions he has rendered thus far in this case – opinions that rely on an inaccurate understanding of the fundamental properties of FLC. *See Florists' Mutual Insurance Co. v. Agstar of New Mexico, Inc.*, 376 F.Supp.2d 1143, 1147 (D. N.M. 2004) (excluding proposed expert's testimony after noting that the proposed expert "does not exhibit the level of specialized knowledge that gives the Court confidence that his testimony would assist the jury" and that the proposed expert "has not demonstrated that he understands the pathology of Pythium or any of its mechanisms").

Defendants cannot meet their burden under *Daubert* and Rule 702 of showing that Mr. Stewart is qualified to opine on FLC. As a result, Mr. Stewart should not be permitted to render opinions related to FLC. By extension, because the Mihara reference *is* an FLC reference, Mr. Stewart is not qualified to opine on the functionality of Mihara, nor its applicability to the '823 Patent, and should not be permitted to render any such opinions.

IV. CONCLUSION

For the foregoing reasons, Honeywell respectfully requests that the Court exclude the testimony of Defendants' expert, Roger Stewart, relating to ferroelectric liquid crystal, including testimony related to the Mihara reference.

DATED: April 23, 2009

Respectfully submitted,

/s/ J. Thad Heartfield

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INC.**

CERTIFICATE OF SERVICE

The undersigned certifies that all counsel of record who have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system per Local Rule CV-5(a)(3) on this the 23rd day of April, 2009. Any other counsel of record will be served by first class mail.

/s/ J. Thad Heartfield
J. Thad Heartfield